

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
22 June 2006 (22.06.2006)

PCT

(10) International Publication Number  
**WO 2006/066007 A1**

(51) International Patent Classification:  
**H04Q 7/38** (2006.01)

(21) International Application Number:  
PCT/US2005/045440

(22) International Filing Date:  
16 December 2005 (16.12.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/636,741 16 December 2004 (16.12.2004) US

(71) Applicant (for all designated States except US): **NORTEL NETWORKS LIMITED** [CA/US]; 2351 Boulevard Alfred-nobel, St. Laurent, Québec H4S 2A9 (CA).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **IBRAHIM, Tarek** [EG/US]; 224 Hudson St. #4b, Hoboken, New Jersey 07030 (US). **BRANCATO, John** [US/—] (\*\*). **BONGIORNO, John** [US/—] (\*\*).

(74) Agents: **MCCUTCHEON, Robert, D.** et al.; Davis Munck, P.C., 900 Three Galleria Tower, 13155 Noel Road, Dallas, Texas 75240 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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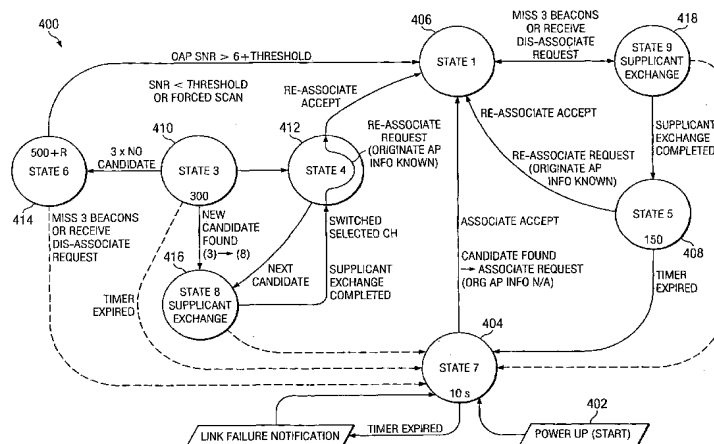
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))
- of inventorship (Rule 4.17(iv))

#### Published:

- with international search report

[Continued on next page]

(54) Title: PICO CELL WIRELESS LOCAL AREA NETWORK (WLAN)



(57) Abstract: A pico cell wireless LAN and pre-emptive roaming algorithm is provided to allow mobile devices in the WLAN to hand-off to another different access point quickly and efficiently. Once associated with an access point (AP), the mobile device receives information about neighboring APs that may be available for hand-off during roaming (or insufficient signal strength). Signal strength of the associated AP is continuously monitored and if signal strength from the associated AP falls below a threshold, the mobile device measures signal strength of the neighboring APs in the list, ranks them, and selects an AP for hand-off. AP load and other information may be used to rank the neighboring APs. The mobile device hands-off to (or associates with) one of the neighboring APs, if appropriate. Hand-offs are attempted in order or rank. Cell sizes in the pico cell WLAN are relatively small, on the order of 1000 square feet or less.

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